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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,841	01/29/2004	Kheng Chiong Tay	07044.0003	2330

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EXAMINER

WARREN, MATTHEW E

ART UNIT PAPER NUMBER

2815

DATE MAILED: 12/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/765,841	<b>Applicant(s)</b> TAY ET AL.	
	<b>Examiner</b> Matthew E. Warren	<b>Art Unit</b> 2815	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1 and 10-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 10-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

This Office Action is in response to the Remarks filed on September 14, 2006.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 10, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arndt et al. (US 6,459,130 B1) in view of Hori (US 6,469,398 B1) and Minamio et al. (US 6,900,524 B1).

In re claim 1, Arndt et al. shows (fig. 1a-1c and 3) optoelectronic component based on a surface mount technology, said optoelectronic component comprising: an electrically conductive frame (17) to form a base for an assembly; at least an optoelectronic chip (1) mounted on the base; and an electrical connection (16) between the optoelectronic chip and the electrically conductive frame (17) by a wiring means (16); soldering terminals (11 and 12) which are part of the electrically conductive frame and are exposed at bottom and side portions of the component; wherein the said electrically conductive frame is entirely encapsulated with a hard transparent or translucent resin material (3) to enable optical radiation to be transmitted or received via the optoelectronic component (col. 4, lines 14-20). Arndt does not show that the soldering terminals (11 and 12) do not extend beyond an outline of the encapsulation

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material because the terminals are bent inward toward the encapsulation material.

However, Hori shows (fig. 1A-AC) a semiconductor package comprising soldering terminals (11 and 12) that do not extend beyond an outline of the encapsulation material (5). With this configuration, it is possible to reduce the package size (col. 8, lines 1-12).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the solder terminals of Arndt by keeping them within the outlines of the encapsulation material as taught by Hori to reduce the package size.

Arndt and Hori show all of the elements of the claims except the grooves and wings in the base material to enhance anchorage which Minamio et al. discloses (abstract). Minamio shows (fig. 1) grooves (19) and wings (next to grooves) formed in the metal frame/base member (13). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the package of Arndt and Hori by forming grooves and wings in a base layer as taught by Minamio to enhance adhesion of subsequently adhered devices and components.

In re claim 10, Arndt discloses that the electrically conductive material is metal (col. 2, lines 44-67).

In re claim 13, Arndt shows (fig. 1c) a cavity (4) is formed in the electrically conductive frame (17) and used to attach the optoelectronic chip within said cavity and serve inherently as a reflector, since the materials and structure are the same as the instant invention.

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Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arndt et al. (US 6,459,130 B1) in view of Hori (US 6,469,398 B1) and Minamio et al. (US 6,900,524 B1) as applied to claim 1 above, and further in view of Hurt et al. (US Pub. 2003/0007749 A1).

In re claims 11 and 12, Arndt, Hori, and Minamio show all of the elements of the claims except the lens or the multiple lens structure to be part of the encapsulation material. Hurt et al. shows (fig. 5) that a lens structure is used in an optoelectronic package to launch radiation into an external fiber or focus received light into the die [0042 and 0043]. The reference does not specifically use multiple lenses however multiple lenses may be required for multiple devices such as components 3 and 4 shown in fig. 5. It would have been obvious to one of ordinary skill in the art to use three, four, etc., lenses to focus light into to multiple devices. It has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960). See also MPEP 2144.04 VI. (B). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the package of Arndt, Hori, and Minamio by adding a lens as taught by Hurt to focus light into a optoelectronic device.

### ***Response to Arguments***

Applicant's arguments filed with respect to claims 1 and 10-13 have been fully considered but they are not persuasive. The applicant primarily asserts that Minamio does not cure the deficiencies of Arndt and Hori because proper motivation has not

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been shown. As stated in the Office Action above, Minamio shows (fig. 1) a lead frame having a series of grooves (19) and wings. As stated in the abstract of Minamio, the sealing resin formed within the upsetting portions (grooves and wings) improves the adhesiveness between the lead frame and the sealing resin therefore realizing high reliability and thinning. One of ordinary skill in the art would apply the teachings of Minamio to the base material of Arndt and Hori to improve the adhesiveness between the base material and the translucent resin material. Therefore, the cited references show all of the elements of the claims and this action is made final.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew E. Warren whose telephone number is (571).

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272-1737. The examiner can normally be reached on Mon-Thur and alternating Fri 9:00-5:00pm.

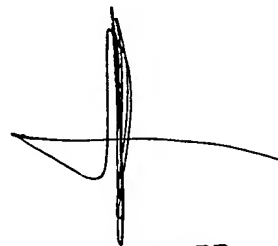
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Parker can be reached on (571) 272-2298. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MEW

*MEW*

November 21, 2006

A handwritten signature in black ink, appearing to read 'K Parker', with a stylized flourish extending to the right.

KENNETH PARKER  
SUPERVISORY PATENT EXAMINEE